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Aggerbeck, Martin; Canulescu, Stela; Rechendorff, K.; Schou, Jørgen; Ambat, Rajan

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## Excitation of anodized alumina films with a light source

M. Aggerbeck<sup>1</sup>, S. Canulescu<sup>2</sup>, K. Rechendorff<sup>3</sup>, J. Schou<sup>2</sup>, R. Ambat<sup>1</sup>

- 1) Department of Mechanical Engineering, Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark
- 2) Department of Photonics Engineering, Risø Campus, Technical University of Denmark, DK-4000 Roskilde, Denmark
- 3) Danish Technological Institute, 8000 Aarhus C, Denmark.
- 4) Optical properties of anodized aluminium alloys were determined by optical diffuse reflectance spectroscopy of such films. Samples with different concentrations of dopants were excited with a white-light source combined with an integrating sphere for fast determination of diffuse reflectance. The UV-VIS reflectance of Ti-doped anodized aluminium films was measured over the wavelength range of 200 nm to 900 nm. Titanium doped-anodized aluminium films with 5-15 wt% Ti were characterized. Changes in the diffuse light scattering of doped anodized aluminium films, and thus optical appearance, with doping are discussed. Using the Kubelka-Munk model on the diffuse reflectance spectra of such films, the bandgap  $E_g$  of the oxide alloys can be determined.